

REMARKS

Reconsideration is requested.

Claims 1-17 are pending.

Claim 1 has been amended, without prejudice, to include details of the present invention described, for example, at ¶[0072] of the U.S. Patent Office published version of the present specification (i.e., US 2004/0182432 A1). New claims 17 further defines the photovoltaic module with sealed insulating glass of independent claim 11 with the details of, for example, ¶[0072] of US 2004/0182432 A1. Claim 2 has been revised to further indicate that the noted plate is formed of the recited film, as described, for example, in ¶[0058] and [0059] of US 2004/0182432 A1. The applicants submit the recitation "as a source material" of the unamended claim will be understood by one of ordinary skill in the art to describe the plate as having been formed from the recited film. The claim has been further revised however in view of the Examiner's apparent misunderstanding that the plate is a film, as noted in the Examiner's comment spanning pages 14-15 of the Office Action dated October 20, 2008. No new matter has been added.

Claim 3 has been revised in response to the Examiner's suggestion on page 2 of the Office Action dated October 20, 2008 to obviate the objection to claim 3.

Withdrawal of the objection to claim 3 is requested.

Claim 11 has been revised to confirm that the subassembly of the claimed module is not adhered to the first plate of glass and the subassembly of the module is not adhered to the second plate of glass, as is believed to be clear from the unamended

claim 11 and the various embodiments of the disclosure. No new matter has been added.

The specification has been revised as suggested by the Examiner on page 2 of the Office Action dated October 20, 2008 to obviate the objection to specification.

Withdrawal of the objection to the specification is requested.

The pending claims define a photovoltaic module subassembly (claims 1-10) and a photovoltaic module with sealed insulating glass (claims 11-17).

The Section 102 rejection of claims 1-4, 7-14 and 16 over Yoda (JP 2003026455) is traversed. Reconsideration and withdrawal of the rejection are requested in view of the following distinguishing remarks.

Anticipation requires each and every aspect of the claimed invention to be found in a single cited reference. The claims are not anticipated by Yoda as Yoda fails to teach or described each and every aspect of the presently claimed invention.

With regard to the claimed photovoltaic module subassembly (claims 1-10), Yoda fails to teach, for example, a subassembly wherein a light receiving surface of a plurality of photovoltaic cells is unbonded to a filler layer. In fact, as further detailed below, the filler layers 4 of Yoda are laminated on to the entire surface of the photovoltaic cells of Yoda. Further, with regard to the claimed photovoltaic module with sealed insulating glass (claims 11-17), Yoda fails to teach, for example, a module wherein a subassembly required by the presently claimed invention¹ is not adhered to a first plate of glass or a

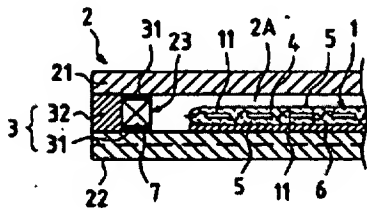
¹ Containing a plurality of photovoltaic cells arranged in an array and electrically interconnected, a translucent, first substantially rigid plate member of resin adjacent to a light receiving surface of said plurality of photovoltaic cells, a second substantially rigid plate member of resin adjacent to a non-light

second plate of glass, as defined by the present claims. In fact, as further detailed below, the assembly containing the photovoltaic cell array **11** of Yoda is adhered to the wired sheet of glass **22** of Yoda with an adhesive tape **6** as shown in Figure 1 of Yoda or to the front cover glass **21** of Yoda with an adhesive tape of Yoda as shown in Figure 3 of Yoda. The claims are patentable over Yoda.

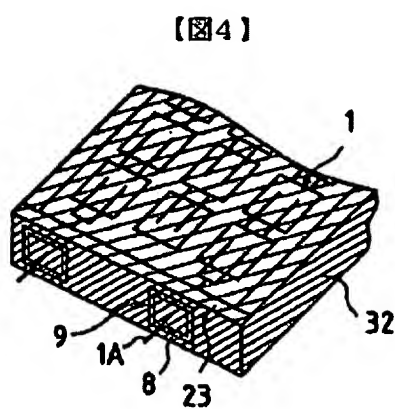
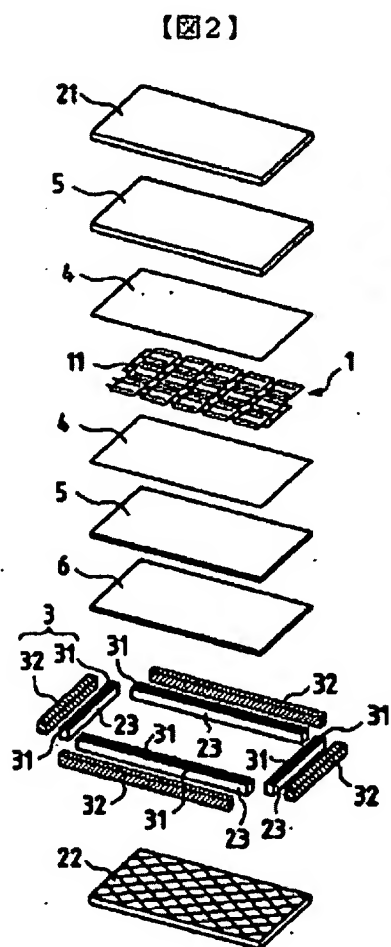
The following is a reproduction of Figures 1-4 of Yoda which describes the relevant structures of the figures as follows:

- 21** – front cover glass;
- 5** – transparent film;
- 4** – transparent filler;
- 1** – photovoltaic cell sequence;
- 6** – transparent adhesive tape;
- 22** – wired sheet glass;
- 2A** – building envelope;
- 2** – multiple glass.

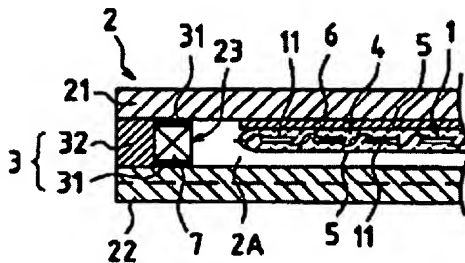
【圖1】



receiving surface of said plurality of photovoltaic cells, and a translucent filler layer located between said first and second substantially rigid plate members of resin to seal said plurality of photovoltaic cells;



【図3】



The Examiner has found the applicants previous distinguishing remarks of record unpersuasive because the Examiner believes the applicants previously argued distinctions over Yoda were a difference in thickness between the plate of the present invention of the films of Yoda, as the claims do not recite a specific thickness, and that the plate of the claims and film of Yoda are different, as claim 2 allegedly defines the plate of the invention as a film. See the paragraph spanning pages 14-15 of the Office Action dated October 20, 2008. As noted above however, the applicants note that the plate of the claims is further defined as having been formed of the recited film. The unamended form of claim 2 defined the film as a "source material" for the plate of the claims. One of ordinary skill will appreciate from the whole of the present disclosure that the plates of the claims provide rigidity to the subassembly of the claims which is not provided by the films of the structures of the cited Yoda reference.

The Examiner is again requested to appreciate that the first "plate" and second "plate" of the claimed invention are not anticipated by the cited art as the structures of the cited art relied on by the Examiner do not contain a corresponding structure.

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Specifically, the “first substantially rigid plate member (5 and 4) of resin” and “a second substantially rigid plate member (5) of resin” cited by the Examiner from Figure 2 of the cited document (see page 3 of the Office Action dated October 20, 2008), are in fact only described in Yoda as a “film”. (5) and “filler” (4). See ¶[0040], [0044], and [0050], of the English translation of Yoda supplied by the Examiner. The Examiner is requested to specifically indicate where the cited Yoda reference describes a “first substantially rigid plate member (5 and 4) of resin” or “a second substantially rigid plate member (5) of resin” in the event the rejection over Yoda is maintained.

One of ordinary skill in the art will appreciate that the “plate” of the claimed invention is structurally distinct from the “film” of the cited art.

While not believed to be necessary, the claims have been revised above to further distinguish the claims from the cited art. Specifically, the claims further define that a light receiving surface of the plurality of photovoltaic cells of the subassembly of the claims is unbonded to recited filler layer. The structure of the claimed module subassembly is not described in the cited Yoda reference.

With regard to the claimed module (rejected claims 11-14 and 16), the Examiner asserts that Figures 1 and 2 of Yoda describe a structure wherein a subassembly of the claims is not adhered to the first plate of glass or the second plate of glass. The above reproduction of Figure 1 of Yoda however clearly illustrates adhesion of a structure containing a photovoltaic cell array 11 to a wire sheet glass 22 by a transparent adhesive tape 6 through a translucent filler 4 and translucent film 5 (see expanded layers in Figure 2 of Yoda). While not cited by the Examiner, the applicants note that

Figure 3 of Yoda illustrates adhesion of a structure containing a photovoltaic cell array 11 to a front cover glass 21 by a transparent adhesive tape 6 through a translucent filler 4 and translucent film 5. The Examiner is requested to specifically indicate where the cited Yoda reference describes a subassembly of the claimed module which is not adhered to a first plate of glass of the claims and a subassembly of the module of the claims which is not adhered to the second plate of glass claims, in the event the rejection over Yoda is maintained.

Withdrawal of the Section 102 rejection of claims 1-4, 7-14 and 16 over Yoda is requested as the cited art fails to teach each and every aspect of the claimed invention.

The Section 103 rejection of claim 5 over Yoda and Yaba (U.S. Patent No. 5,059,254), is traversed. Reconsideration and withdrawal of the rejection are requested as claim 5 which depends from claim 1 and includes all the details thereof, includes the requirement that the subassembly contains the "plates" described above. Moreover, claim 5 requires that a light receiving surface of the plurality of photovoltaic cells of the claims is unbonded to the filler layer of the claims, as recited in claim 1, which would have been contrary to the teachings of Yoda. The teachings of the secondary reference are relied upon by the Examiner for allegedly teaching colored layers. See pages 6-7 of the Office Action dated October 20, 2008. The secondary reference however fails to cure the above-noted deficiencies of the primary reference. The subassembly of claim 5 therefore would not have been obvious in view of the combination of Yoda and Yaba. Withdrawal of the Section 103 rejection is requested.

The Section 103 rejection of claim 6 over Yoda and Ichinose (U.S. Patent No. 5,681,402), is traversed. Reconsideration and withdrawal of the rejection are requested as claim 6 which depends from claim 1 and includes all the details thereof, includes the requirement that the subassembly contains the "plates" described above. Moreover, claim 6 requires that a light receiving surface of the plurality of photovoltaic cells of the claims is unbonded to the filler layer of the claims, as recited in claim 1, which would have been contrary to the teachings of Yoda. The teachings of the secondary reference are relied upon by the Examiner for allegedly teaching UV absorber-containing layers. See page 7 of the Office Action dated October 20, 2008. The secondary reference however fails to cure the above-noted deficiencies of the primary reference. The subassembly of claim 6 therefore would not have been obvious in view of the combination of Yoda and Ichinose. Withdrawal of the Section 103 rejection is requested.

The Section 103 rejection of claim 15 over Yoda and Sakaitani (JP2001262782), is traversed. Reconsideration and withdrawal of the rejection are requested as claim 15 which depends from claim 11 and includes all the details thereof, includes the requirement that the subassembly is not adhered to the first plate of glass and the subassembly is not adhered to the second plate of glass, which would have been contrary to the teachings of Yoda. Yoda describes attachment of an assembly containing a photovoltaic cell array to at least one of the glass surfaces by an adhesive tape as a "comparatively thick shock absorbing material". See paragraph [0030] of the English translation of Yoda provided by the Examiner. The teachings of the secondary

reference are relied upon by the Examiner for allegedly teaching a structure containing a guide rail. See page 8 of the Office Action dated October 20, 2008. The secondary reference however fails to cure the above-noted deficiencies of the primary reference. The module of claim 15 therefore would not have been obvious in view of the combination of Yoda and Sakaitani. Withdrawal of the Section 103 rejection is requested.

The Section 103 rejection of claims 1-4 and 7-16 over Sakaitani and Yoda is traversed. Reconsideration and withdrawal of the rejection are requested in view of the above and the following distinguishing remarks.

The claims are patentable over Yoda for the reasons noted above. The claimed invention would have been contrary to the teachings of Yoda, for the reasons noted above. The deficiencies of Yoda are not cured by Sakaitani.

In fact, as admitted by the Examiner, Sakaitani fails to teach or suggest the structural requirement of the claimed subassembly or a module containing same, as presently claimed. See page 8 of the Office Action dated October 20, 2008. Sakaitani is only believed to teach a solar panel structure 11 "which sandwiched two or more solar battery elements of the crystal system or an amorphous silicon system between them and filled up the crevice between internal with adhesive transparent resin, such as PVB or EVA." See paragraph [0008] of the English translation of Sakaitani supplied by the Examiner.

Sakaitani fails to teach or suggest a subassembly of the claimed invention or a module of the claimed invention. Sakaitani fails to teach or suggest a subassembly of

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the claimed invention wherein a light receiving surface of a plurality of photovoltaic cells is unbonded to a filler layer. In fact, the above-quoted passage of Sakaitani indicates that the structure of Sakaitani includes an adhesive transparent resin "filled" in the crevice between the solar battery elements. Moreover, Sakaitani fails to teach or suggest a module containing a subassembly of the claims wherein the subassembly is not adhered to a first plate of glass and a subassembly of the claims is not adhered to a second plate of glass of the claims. The combination of Sakaitani and Yoda would not have made the presently claimed invention obvious.

Withdrawal of the Section 103 rejection of claims 1-4 and 7-16 over Sakaitani and Yoda is requested.

The Section 103 rejection of claim 5 over Sakaitani, Yoda and Yaba, is traversed. Reconsideration and withdrawal of the rejection are requested as claim 5 which depends from claim 1 and includes all the details thereof, includes the requirement that the subassembly contains the "plates" described above. Moreover, claim 5 requires that a light receiving surface of the plurality of photovoltaic cells of the claims is unbonded to the filler layer of the claims, as recited in claim 1, which would have been contrary to the teachings of Yoda and Sakaitani. The teachings of the secondary reference (i.e., Yaba) are relied upon by the Examiner for allegedly teaching colored layers. See pages 13-14 of the Office Action dated October 20, 2008. The secondary reference however fails to cure the above-noted deficiencies of the primary references. The subassembly of claim 5 therefore would not have been obvious in view of the

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combination of Sakaitani, Yoda and Yaba. Withdrawal of the Section 103 rejection is requested.

The Section 103 rejection of claim 6 over Sakaitani, Yoda and Ichinose, is traversed. Reconsideration and withdrawal of the rejection are requested as claim 6 which depends from claim 1 and includes all the details thereof, includes the requirement that the subassembly contains the "plates" described above. Moreover, claim 6 requires that a light receiving surface of the plurality of photovoltaic cells of the claims is unbonded to the filler layer of the claims, as recited in claim 1, which would have been contrary to the teachings of Sakaitani and Yoda. The teachings of the secondary reference (i.e., Ichinose) are relied upon by the Examiner for allegedly teaching UV absorber-containing layers. See page 14 of the Office Action dated October 20, 2008. The secondary reference however fails to cure the above-noted deficiencies of the primary reference. The subassembly of claim 6 therefore would not have been obvious in view of the combination of Yoda and Ichinose. Withdrawal of the Section 103 rejection is requested.

The claims are submitted to be in condition for allowance and a Notice to that effect is requested. The Examiner is requested to contact the undersigned if anything further is required in this regard.

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Respectfully submitted,

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